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The Legitimacy of the Contemporary

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»The only question that remains is the sense in which science (Wissenschaft) gives ›no‹ answer, and whether or not science (Wissenschaft) might yet be of some use to the one who puts the question correctly.« (Weber 1946: 143)[1]

The initial mapping and sequencing of the human and other genomes during the course of the 1990s was an event; in its wake almost everyone seems to agree that we are on the verge of something momentous and extravagant. In English, »verge« means the boundary beyond which something happens or changes. The sequence, it is true, is only one in a larger series of recent bravura, techno-scientific accomplishments, that individually and in an accumulative fashion, raise a host of unsettling and unsettled issues ranging from the scientific, to the ontological, to the ethical, to the political. Today, there is ferocious contestation over whether these achievements are: (a) transgressing a boundary whose integrity we must respect; or (b) crossing over a threshold leading to unforeseen encounters and challenges; or (c) simply moving from one farmer's field to the next (the original meaning of verge) and thereby basically issues of private property and the commons. But how is one to decide where one is? And where one is going?

To put the question another way: how is one to decide: what difference does today introduce with respect to yesterday? That formulation, of course, is how Michel Foucault, two decades ago, rephrased the question – »What is Enlightenment?« – posed by Immanuel Kant's two centuries earlier (Foucault 1984: 34). The core claim of this paper is that to better understand the question, the stakes, and hopefully the way to proceed, – Kant's famous »exit«, »Ausgang«, from immaturity – we require something like an anthropology of the contemporary.

A variant of the question Foucault posed, albeit in a quite different form, can be found in the great work of Hans Blumenberg, especially his magnum opus, The Legitimacy of the Modern Age. Arguing against Martin Heidegger, Carl Schmitt, Karl Lowith, and others who saw in modern forms of self-assertion and reason,

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* Anmerkung des Herausgebers: Paul Rabinow gibt hier nicht seine Kasseler Mittagsvorlesung wieder, sondern widmet sich der Frage nach der »Legitimacy of the Contemporary«.

1 My gratitude to James Faubion and Tobias Rees.

dangerous nihilism or self-deluding attempts to overcome Christianity while only furthering its deepest essence through the process of secularization, Blumenberg's book is a plea and justification, an apologia, an éloge, for a distinctive space of inquiry, one that is affirmative of a modern ethos. Blumenberg's legitimacy of modernity is as well a variant of the legitimacy of the contemporary, a call to remain open to the present, against narratives of decline, disaster, and other forms of closure. For Blumenberg, the difference that constitutes modernity's legitimacy, and possibly an Ausgang, is a critical one: once one finds oneself on the verge of casting the present in epochal terms (as a historical totality), as we have become accustomed to do since the nineteenth century, one must cease and desist; once one finds oneself attempting to answer the old metaphysical and theological problems with which so much Western philosophy is still enmeshed, one should pause and attempt to ask, with more precision – what is the problem that makes a difference now? By so doing, it might be possible to affirm a form of conceptual curiosity and appropriate self-assertion about and within the contemporary. Dare to know! But only those things that can be known.

Odo Marquard, in his *Schwierigkeiten mit der Geschichtsphilosophie*, carries these reflections forward by questioning how we could think about change without a philosophy of history; and produce an anthropology without a fixed conception of Man. These questions are precisely the domain of an anthropology of reason and/or an anthropology of the contemporary. Such an anthropology, however, would explore more heterogeneous territory than the largely conceptual terrain to which thinkers like Blumenberg and Marquard restrict themselves. Today, anthropos is in question; this questioning has multiple dimensions to it. One of those dimensions, but only one, is the rise of a powerful new set of sciences. Thus, it is unequivocally the case that the logos of bios is currently in the process of rapid transformation. A central question before us today therefore is: given a changing biology, what logos is appropriate for anthropos? And how should that logos be practiced so as to increase our capacities without intensifying the myriad relations of brutalization that are so pervasive in to our times? Brutalization: the act of treating something viciously, without care. The older meaning refers to the state of existence of animals and lower races; the contemporary meaning refers to how these living beings are treated by the civilized and humane. And the consequences for those doing so.

2000. Drosophila Lessons

There is little doubt that the March 24, 2000 issue of *Science* entitled *The Drosophila Genome* marks a threshold. The humble fruit fly has been the twentieth century's organism of choice for studying genetics. Its centrality has persisted from its early fame at Columbia University, where it was chosen as a model organism in part because its reproductive habits fit the academic calendar, up to the present, when a hybrid consortium of public university labs (especially Berkeley) and the controversial biotechnology company Celera Genomics, chose Drosophila as a demonstration project for their genome mapping strategies. Celera did so in part to prove to its competitors (especially the US government funded university/philanthropy consortium mapping the human genome) the power of its sequencing approach. The Drosophila sequence was also presented as a gift to science (free CD-ROMs are available), a token of this early twenty first century triumph of utter technological power. More has been learned in the three years about Drosophila genetics than had been painstaking accumulated in the previous seventy-five. Thus, the »Drosophila Genome« issue of *Science*, contains much to ponder for geneticists and for non-geneticists alike.[2] And, of course, it wasn't long, before *Science* published its special issue on *The Human Genome*.

One of the elder statesmen of genetics, the Nobel Prize winner, Sydney Brenner, in a trenchant summary piece, preceding the »The Drosophila Genome« insert, aptly entitled »The End of the Beginning«, brilliantly frames the significance of the current conjuncture in genetics. Brenner, himself the leader of the project to map the worm, *C. Elegans*, opens his article by observing that: »In classical experimental genetics, we could not assert the existence of a wild-type gene until a mutant version with an altered function had been isolated. But«, he continues, »if one asked how many genes were required to make a bacteriophage or a bacterium or a fly or a mouse, no answer could be given«. (Brenner 2000: 2173) Classical geneticists could never have produced a *The Drosophila Genome* special issue because although they had developed techniques to isolate and map »genes«, classical genetics had no concept equivalent to what is today called »a genome«. Consequentially, it is not surprising that no answer was given to a question that could not be scientifically, posed: what is a genome?

Just as »genes« and »genomics« are not the same thing, so too, »genes« and »DNA« are not the same thing. In fact, DNA plays an intermediary role between genes and genomes. The major shift that eventuated in the invention, discovery, and

2 *Science*, 24 March 2000, The Drosophilia Genome, vol. 287. Although there is an excellent history of Drosophilia genetics, Robert E. Kohler (1994), »Lords of the Flies: *Drosophilia* Genetics and the Experimental Life«, Chicago, it is not mentioned in the entire issue of Science.

mapping of genomes during the 1990s arguably began with the shift from »genes« to »DNA«. Following the discoveries of the 1950s and 1960s in which the fundamentals of the double helix and genetic code were painstakingly unraveled, the 1970s and 1980s saw the invention of a series of technologies devoted to manipulating DNA (regardless of its function); the most important were DNA sequencing, cloning DNA in bacteria, and the polymerase chain reaction (referred to as ›in vitro‹ cloning) a technique that enabled the rapid, efficient, and inexpensive production of large quantities of specific DNA sequences. With the invention of PCR at Cetus Corporation, a scarcity of DNA available for experimentation turned into a bounty of DNA available for experimentation. The 1970s and 1980s were also the decades during which the material conditions of production of truth in molecular biology, biochemistry and genetics were undergoing, not coincidentally, equally significantly changes. These were the decades of the emergence of the bio-technology industry – the end of an elite, artisan, craft culture in biology, even in the recently forged specialty of molecular biology and its rapid replacement with a distinctive type of heavily machine mediated, costly mode of quasi-industrial production, replete with a much larger and more functionally diverse labor force including computer technicians, lawyers, CEOs and advertising agencies. Joining the crowded world of DNA was another new player, bioethicists. While companies such as Genentech, Cetus and Biogen were shaping the field; the university world was itself moving significantly closer to this new industrial mode of operation. By 1989, it was daring but plausible for the United States National Institutes of Health and Department of Energy (involved in radiation research since the dropping of the atomic bombs in Japan) to announce a Human Genome Initiative, designed to map (and eventually sequence) the human genome – defined ambiguously as the total complement of DNA in a human cell – and thereby it was proclaimed to bring health and prosperity – eventually – to many.

Today, 14 years later, a series of genomes have been mapped through massively funded, international, industry-government-university-philanthropy consortia. Many consequences and questions flow along with this achievement. Prominent among them is a contemporary rethinking of the »gene«. Scientifically speaking, »genes« are not what they used to be. Brenner ruefully remarks, »Old geneticists knew what they were talking about when they used the term ›gene‹, but it seems to have been corrupted by modern genomics to mean any piece of expressed sequence«. Instead of the misleading and anachronistic term »gene«, Brenner proposes to substitute the term »genetic locus« to indicate »either an open reading frame or a site to map mutations«. (Brenner 2000: 2174) An open reading frame is »a DNA sequence that potentially can be translated into protein«. It should be no surprise to learn that proteomics companies are appearing and calls for inventories of proteins are increasingly mentioned as vital.

The full impact of this conceptual shift in our understanding of living beings has not achieved an adequate place in public understanding given all the attention that the media has lavished on the »gene for« this, that, and the other thing, as well as such hot button issues, seemingly rife with epochal significance, such as »patenting life«, (remember that) »cloning humans«, and »genetically modified foods«. In fact, the gene for this-that-and-the-other-thing should probably been seen as one of the last triumphs of what Brenner calls »classical genetics«. It is eminently worthwhile underscoring Brenner's point that locating genes is not the same thing as mapping or sequencing genomes. Furthermore, those engaged in the latter enterprise are perfectly clear that these stages are only an initial step in understanding them. Once the genomes are mapped and sequenced and once the basic proteomic cataloging work is accomplished, the functional biology will only just have begun. Brenner observes that these maps are static. None of the information in them as it is currently collected tells us when genes are switched on and off and for how long. Such information, Brenner observes, is »absolutely essential (…) because in complex organisms, evolution does not proceed by enlarging the protein inventory but by modulating the expression of genes«.

In an equally stunning summing up of the state of comparative genomics in the year 2000 the head of the Berkeley *Drosophila* project, Gerald Rubin, and a host of co-authors presented the first overviews of the »Comparative Genomics of the Eukaryotes«[3] Rubin and colleagues set out a series of initial insights that are in many ways counter-intuitive and quite surprising. Let me just list some of them:

(a) *Drosophila* has a proteome only twice the size of that of yeast. And, despite the large differences between fly and worm in terms of development and morphology, they use a core proteome of similar size«.[4]
(b) Complexity and number of genes are not directly correlated »There is presently no practical way to quantify differences in biological complexity between two organisms«.
(c) »Genes with similar functional assignment in the Gene Ontology classification do not appear to be clustered in the genome«.
(d) Human Disease Genes. A list was compiled of 289 genes that are mutated, altered, amplified, or deleted in a diverse set of human disease and searched for similar diseases in the three genomes. Of these 289 human genes, 177 (61%) appear to have an ortholog in *Drosophila*. Of the human cancer genes surveyed,

3 Gerald Rubin, Suzanna Lewis et al, »Comparative Genomics of the Eukaryotes«, Drosophilia melanogaster, Caenorhabditis elegans, Saccharomyces cervisiae. (protein domains, (2) intracellular networks, (3) cell-cell interactions).
4 Rubin, »Comparative«, (Haemophilus = 1425, Yeast = 4383 proteins, fly = 8065, worm = 9453).

68 percent appear to have *Drosophila* orthologs. Numerous orthologs of neurological genes are also found in the *Drosophila* genome.

(e) *Drosophila*'s utility, as an experimental site will only increase. Many of the human disease genes are found in only a single copy in the fly and hence there is less ambiguity about their function. Gene manipulation in the fly is easy and can demonstrate possible genetic therapeutic approaches. We anticipate the increased use of such ›humanized‹ fly models.[5]

(f) The human genome, with 80,000 or so genes, is likely to be an amplified version of a very much smaller genome, and its core proteome may not be much larger than that of the fly or worm; that is, the more complex attributes of human beings are achieved using largely the same molecular components. The evolution of additional complex attributes is essentially an organizational one: a matter of novel interactions that derive from the temporal and spatial segregation of fairly similar components«.

Notice, please, that in the year 2000 Rubin's estimate of the number of human genes was off by at least an order of magnitude. In the fall of 2003, Affymetrix, a Silicon Valley company announced a gene chip that would monitor expression patterns of all the genes in the human genome. This task was facilitated by the fact that the number of genes to monitor is about one third of what was expected. However, as Stephen Fodor, the founder and CEO of Affymetrix, told me in September 2003, since the coding regions of the genome represent only about two percent of the DNA, there is much work left to be done on what the rest of the genome is doing. Of course since then the discovery of interference RNA has led to a more precise understanding of splicing processes and a burgeoning set of start-up companies.

Scientific knowledge, even its fundamental truths, changes. Accepting that condition is what makes science a difficult and challenging vocation. Those not ready to live within such instability with its pleasures and frustrations, as Weber taught us, should seek other work.

The Future of Human Nature

Germany's most distinguished philosopher, Jürgen Habermas, in his manifesto, *The Future of Human Nature*, boldly answers the call to come to terms with recent events taking place in the life sciences as well as in ethics. In his book, rather surprisingly

5 »Comparative« (ref. 57), J.M. Warrick et al. (1999), Nature Genetics, vol. 23, p. 425.

he does not take up the life sciences at all. He chooses to cast the question of ethics as a dilemma formulated by the following rhetorical question:

»Do we want to treat the categorically new possibility of intervening in the human genome as an increase in freedom that requires normative *regulation* – or rather as self-empowerment for transformations that depend simply on our preferences and do not require any *self-limitation*?« (Habermas 2003: 12)

The question is a rhetorical one in the sense that the way Habermas posed it he has already answered it. He devotes the core of his short book to making arguments in favor of banning intervention in the human genome (now and forever). Habermas' conclusion, although not the reasons for it, is basically the same one as that of Frances Fukuyama and Leon Kass, both formerly members of President Bush' National Commission on Bio-Ethics, which is to point out that similar intellectual and moral positions can be held by people spanning the political spectrum. Although I disagree with this position, there is no doubt that it must receive the attention of anthropologists today for, when all is said and done, what is at stake is an understanding of – and an attitude toward – *anthropos* and of *logos*.

There are a series of claims, both explicit and implicit, in Habermas's question.

- Intervening in the human genome is categorically new.
- That freedom is quantitative.
- That there are norms to guide regulation.
- That there is an existing »we« who could judge such matters and legislate them.
- That such decisions stem from desires.
- That choices arising from preferences are simple.
- That such choices refer to the self.
- That practices of the self do not entail ethical limitations.
- That the possibilities are either normative regulations of a »we« or preferences of a »self«.
- The way to think about these questions is abstractly.

He appears to posit two human natures: a biological one that he equates with the genome (although we are told nothing about what he considers the genome to be); the second is a human nature exterior to the genome as well as being qualitatively different from it. Identity, the capacity for healthy human relations, and individual self-worth, all depend on the genome remaining untouched in a state of nature; it is only when that condition of inviolability is met that we can be assured that our autonomy and freedom are protected, or at least the conditions are in place for it to be so. On the face of it, each of these claims is dubious and far from self-evident. As anthropologists, however, no native claims should be taken as absurd a priori – after all our discipline has spent years unraveling the complex semiotics that make a

speech act possible and coherent whereby an Amazonian tribesman claims to be a parakeet. Here, as with the Bororo, we seem to be dealing with a worldview. Or at least that is how anthropology has traditionally cast such matters.

Habermas' book is a social fact. It is a part of a distinctive contemporary moral landscape. This landscape is not external (as Habermas seems to assume) to the current re-configuration of »*anthropos*;« bio-ethics and biosciences are in a relationship, often a discordant one, but still a relationship. Thus, it is perfectly legitimate for an anthropologist to map the reconfigurations of the *logos* of *anthropos* and thus to analyze Habermas's intervention as part of contemporary affairs.

In terms of cultural history, there is nothing opaque about Habermas' position; it is essentially a lightly modified version of the nineteenth century understanding, widespread in German philosophic circles, that technology and nature are ontologically separate realms that must be kept epistemologically and morally distinct. In the Kantian tradition, nature is the realm of necessity and reason the realm of freedom. Although Habermas emphatically affirms that distinction, he also introduces a variant of Hegelianism as well:

> »Subjectivity, being what makes the human body a soul-possessing receptacle of the spirit, it itself constituted through inter-subjective relations to others. The individual self will only emerge through the course of social externalization, and can only be stabilized with the network of undamaged relations of mutual recognition.« (Habermas 2003: 34)

Habermas states and restates his position in a remarkable variety of ways: perhaps he is not yet sure which formulation is the best one; perhaps he recognizes that the formulations themselves are unstable and don't bear much intellectual scrutiny. The advances of molecular biology appear to be making it possible to intervene in fundamental regulatory mechanisms of living beings. We must beware, however, as this capacity may lead us places we do not normatively want to go. We need critical limits because there is a danger of »obliterating the boundary between persons and things«. In the light of this diagnosis, Habermas' basic imperative follows logically: »This kind of intervention should be exercised only over things, not persons.« (Habermas 2003: 13) Although this imperative sounds like Kant, old Kant was just a shade less categorical than Habermas: Kant says: »So act as to treat humanity, whether in thine own person or in that of any other, in every case as an end withal, never as a means only«. (Kant 2004: 46) In my opinion, Kant's »only« adds a crucial space of reflection and action.

Bio-Ethics: The Question Concerning Humanism

Habermas's schema does not seem to have a category of »living beings«. Thus, apparently it would be normatively permissible to intervene in the genomes of Drosophila, mice, yeast, and chimps – and to treat them like things. Granted, Habermas does express some ambivalence on this point. The tone of the following sentence (and others like it) is clearly one of disapproval: »What was hitherto ›given‹ in organic nature, and could at most be ›bred‹, now shifts to the realm of artifacts and their production.« (Habermas 2003: 12) Habermas speaks of »ruthless intrusion«, into nature although there is no evident reason why he chooses to call these practices »ruthless« and not »caring«. It is striking – and not innocent – that Habermas invokes the following example: »It is true that, just like the rationalization of agriculture, which was rationalized according to business management principles, the technological equipment and up-grading of a health-care system dependent on pharmaceutical businesses and medical machinery have been prone to crisis.« (Habermas 2003: 46) The »prone to crisis« phrase is a strange one as if pre-capitalist peasant agriculture or Socialist agriculture and medical systems were not prone to crisis. It is impossible not to hear uncanny echoes here of Heidegger's claim that there is no difference between mechanized agriculture and the concentration camps. For these German philosophers at least, admixtures of technology and nature remain morally unbearable and, perhaps for that reason, unthinkable.

Habermas is most concerned with establishing moral boundaries to protect an endangered humanity. Habermas basically does seem willing, however reluctantly, to accept technological intervention in external nature: »From a life-world perspective, however, our attitude changes as soon as this extension of our technological control crosses the line between ›outer‹ and ›inner‹ nature.« (Habermas 2003: 23) The foundation but not the essence of that »inner nature« seems to be genomic. Thus:

> »Up until now both the secular thought of European modernity and religious belief could proceed on the assumption that the genetic endowment of the newborn infant, and thus the initial organic conditions for its future life history, lay beyond any programming and deliberate manipulation on the part of other persons.« (Habermas 2003: 13)

Although this claim is historically dubious, the message is clear. It is debatable because the largely secular eugenics movement of both the right wing and the left wing certainly wanted to intervene in the genetic endowment of the newborn infant. What these movements understood by »genetic endowment« has taken on incompatible meanings over the course of the last century. The public health movement certainly sought to intervene deliberately and in a regulatory fashion in »the initial organic conditions« of life.

Habermas identifies a slippery slope so dear to Anglophone ethicists and philosophers and adds to it a bit of apocalyptic rhetoric from old Europe. »Once you start to instrumentalize human life, once you start to distinguish between life worth living, and life not worth living, you embark on a course where there is no stopping point.« (Habermas 2003: 19)

There is another kind of analytic slippage here, one between an instrumentalizing of human life, on the one hand, and deciding on which lives are worth living, on the other. Surely it is possible for someone to decide (alone, with their family, friends, doctors, pastoral care givers) that their life is no longer worth living without that decision leading to the concentration camps. To claim otherwise is to retreat from the »demands of the day«, as Weber put it. Regardless, for Habermas, the remedy is clear. »The abstract morality of reason proper to subjects of human rights is itself sustained by a prior *ethical self-understanding of the species,* which is shared by all *moral persons.*« (Habermas 2003: 40)

For many of us this statement occasions fear and trembling, shock and awe, and above all anger. The idea that there is an a prior ethical self-understanding of the species; and that if you don't share it with Habermas you are not a moral person is, to use one of his terms, repugnant.

There is much to be said about all of this. Here I point out that, as we are no longer in the nineteenth century, the resurrection of this old stance perks the curiosity of an anthropologist of the contemporary. Habermas activates old concepts to encompass and secure the present: precisely his definition of neo-conservatism, one he used polemically in other debates. An anthropologist of the contemporary is attentive to the issue of »What difference does today make with regard to yesterday?« This position by no means rejects the use of older concepts, quite the contrary, but it does attempt to look at them anew, to refashion them in light of new elements and new problems. The ethos of the contemporary contrasts with that of the modern; it is not fascinated with the new per se but concerned with the emergence and articulation of forms within which old and new elements take on meanings and functions. Today, there is no doubt that one side of such problems is: how might we forge a way of life that does not make a sharp and brutal separation between what used to be called nature and culture?

Nature

Georges Canguilhem, in an acerbic article entitled »*Nature dénaturée et Nature naturante*«[6] provides a stern pedagogical lesson to those who hold sentimental views of nature's purity. Canguilhem's article was written at a time (1976) when ecology was gaining a momentary prominence on the French political scene. Canguilhem observes Western history has seen sporadic waves of protest against the putative »de-naturation of human life in both its means and its ends« putatively caused by technico-economic practices. The common denominator of all such protests is an affect of regret, a deploring of the loss of an imagined, unmediated contact with »(…) *cette sorte d'absolue originaire, de référence indépassable, dont il est rêvé sous le nom de Nature.*«[7] (Canguilhem 1976: 71) For Canguilhem such a position is scientifically absurd although he admits, not without a certain self-satisfaction dear to secular French thinkers, that the position as well as its associated emotion, could well be theologically coherent.[8]

All techniques are artificial; this banality, however, does not imply that techniques are metaphysically distinct from or opposed to nature in any ontological way. For example, if agricultural techniques are to succeed they must be »rigorously conditioned by the very nature of animal and vegetable functions of growth and multiplication«. (Canguilhem 1976: 78) This stricture applies to whatever form of technology is at issue be it that of peasants, industrial agriculturalists, or organic farmers. »*L'homme a longtemps semé ce qu'il avait récolté sans l'avoir fait pousser.*«[9] (Canguilhem 1976: 79) One can intervene in multiple ways with organic things but the things themselves must have the potential to integrate those changes if the results are to be anything approaching what those applying the technology had sought to bring forth. Certain interventions will do nothing or produce loss; others will increase yield or produce unexpected results. Technology can be seen as a mode of revealing potentials, not essences.

Canguilhem draws two major conclusions from this principle. First: »Scientifically speaking, denaturation is meaningless. Technically speaking, denaturation means a change in use. No use is inscribed in the nature of things. The very first use of a thing is its denaturation«.[10] Or said another way: »It is certain that one does not

6 »Nature denatured and naturalizing nature.«

7 »(…) that originary absolute, essential reference, about which people dream under the name of nature.«

8 Hence Canguilhem would have equal scorn for those like Luc Ferry who reject ecology in the name of a neo-Kantian humanism that sacralizes the subject and Man.

9 For a long time, man has harvested that which he has sown without having made it grow.

10 »Tels qui croient tenir un langage humaniste usent en fait d'un vocabulaire théologique. Scientifiquement parlant, dénaturation n'a pas de sens. Techniquement parlant, dénaturation signifie

denature nature in orienting its powers towards effects that are not the usual ones«.[11] We are only just beginning to learn again how polyvalent and over-determined organic systems already are; we know very little about their limits. Biotechnological interventions will surely teach us more. Such knowledge, like all knowledge, carries with it risks.[12]

Security, Danger, Risk

When discussing risk there is always a definitional question to be addressed, as there are many different ways to approach the topic. Here I adopt the distinctions proposed by Niklas Luhmann, in his book, *Risk: A Sociological Analysis*. Luhmann asserts that the world »knows no risks, for it knows neither distinctions, nor expectations, nor evaluations, nor probabilities –*unless self-produced by observer systems in the environment of other systems*«. (Luhmann 1998: 6) This claim means that any discussion of risk taking or risk making entails a reflective state of affairs and a decision about significance, a perfectly Weberian starting point.

Risk has been frequently coupled with »security«. This coupling is polemically useful but analytically weak. If one opposes something and wants to discredit it then it is smart to contrast risk with security (or safety). By so doing one implies that there exists a clear choice between a secure state of affairs and one that is not. Of course, the problem is that it is hard to see how anyone could choose the undesirable conditions rather than the desirable ones. If choosing security is a fool's paradise, another way forward is to make the primary distinction risk/danger instead of risk/security. By so doing one shifts the focus from a quest for security to an atten-

changement d'usage. Or, aucun usage d'une chose n'est inscrit dans la nature des choses. Le premier usage d'une chose est sa dénaturation.« (Canguilhem 1976: 84)

11 »Il est certain qu'on ne dénature pas la nature en orientant ses pouvoirs d'effets qui ne lui sont pas ordinaires.« (Canguilhem 1976: 85)

12 »Parce que la nature ne peut qu'être naturante, une nature dénaturée, à la fois fille et mère de la culture, est possible. Parce que cette dénaturation a du emprunter progressivement les voies de l'abstraction et de la représentation non-figurative qui sont celles de la science, et que de ce fait on n'a pas su reconnaître dans la nature dénaturée la nature naturante, une plainte et une colère sont nées, auxquelles la littérature et l'idéologie s'efforcent en vain de donner un poids philosophique.« The second point: »Because nature can only be natural, a denatured nature, at one and the same time the mother and daughter of culture, is possible. Because that denaturation progressively followed the path of abstraction or of non-figurative representation which are those of science, and because of this fact one has failed to recognize ›*la nature naturante dans la nature dénaturée*‹, complaint and anger have arisen, and literature and ideology have vainly sought to give these emotions some philosophic weight.« (Canguilhem 1976: 87)

tion to possible future loss. In this mode one can make a link between a potential loss and a string of decisions that might lead to it: at that point one is speaking of risk, or as Luhmann says »the risk of decision«. Once one begins to operate within the logic of risk and danger, the horizon of safety by no means disappears; rather it remains unmarked in the linguistic sense. Within the pair of risk/danger one can emphasize either side: If one downplays the side of decision making than »the possible loss is considered to have been caused externally; that is to say, it is attributed to the environment. In this case we speak of danger«. (Luhmann 1998: 21) Those who mark risk, downplay dangers; »whereas marking dangers allows the profits to be forgotten that could be earned if risky decisions are made«. (Luhmann 1998: 24) A reflective observer sees that there can be no risk free behavior. Deciding to act poses risks of loss in the future but the observer notes that it is equally true that not acting carries with it its own consequences.

Luhmann draws two further consequences relevant here. He calls the first, »the contingency schema«. If one is concerned with the issue of future loss and of decision making, then we are faced with »two temporal contingencies, event and loss are firmly coupled as contingencies (not as facts!), this makes it possible for observers to differ in the way they see things. Temporal contingencies provoke social contingencies, and this plurality, cannot be cancelled out by an ontological formula. (Luhmann 1998: 17) For Luhmann accepting contingency means taking up a modern ethos toward the modern world.

Luhmann's second insight rejoins Canguilhem: »Modern risk oriented society is a product not only of the perception of the consequences of technological achievement. Its seed is contained in the expansion of research possibilities and of knowledge itself«. (Luhmann 1998: 28) The more science we do, the more knowledge we make, the more technological intervention becomes possible, the more choices are posed, the more risk there is, the more the imperative to act or not to act imposes itself. And that point must be the beginning of seeing what difference today makes with respect to yesterday: vigilance and intervention *même combat*.

Contemporary Formations

Although Habermas, Canguilhem and Luhmann are helpful in different ways: none of them sufficiently problematizes the contemporary. Habermas is hyper-vigilant about dangers; his diagnostic of the present leads him to seek transcendental protection – the moral is untouched by the ethical – thereby deterring him from staying close to those changes, and consequently devoting himself to thinking about, or evaluating, them in their specificity and singularity, that is to say in their reality.

Luhmann (for reasons that would take longer to explain) provides an epochal diagnosis of modernity as based on contingency but by so doing he slips into a position of a first-order observer, a position that a second-order observer would have to qualify as contingent. Luhmann knows this but even he is carried away into reifying modernity as risk society. Canguilhem acutely analyzes shifting scientific and technological changes but takes them up as fundamentally unproblematic; while such a position entails that he keep close to emerging practices of knowledge, it does not allow him to pay sufficient attention to the risk dimension that such practices open up. An anthropology of the contemporary, thus, faces the challenge of finding a means to remain close to diverse current practices producing knowledge, ethics, and politics, while adopting an attitude of discernment and adjacency in regard to them, thereby providing a space for a more precise and better formulation of contemporary problems and risks.

We learned from Darwin that humans are part of the animal kingdom. We are merely one species among a vast array of living beings, all subject to the great scheme of evolution and governed by natural selection. Freud called this insight one of the three great blows to humanity's narcissism. So here we are today, amidst a new set of claims and insights, attempting to sort out the scientific wheat from the scientific chaff. One touchstone for such sorting is to be attentive to anthropomorphic metaphors that pervade scientific prose.

Researchers at McGill Medical Center recently reported, in a *Science* article entitled, »Nongenomic Transmission Across Generations of Maternal Behavior and Stress Responses in the Rat«, that variations in maternal care seem to influence how the young respond to stress – those that are given less care are more stressed. This result is not that surprising. Of more interest is the article's claim to evidence of a neo-Lamarckian mode of transmission: the »transmission of such individual differences in maternal behavior from one generation of females to the next through behavior«. This conclusion was arrived at through highly intrusive (if carefully controlled) intervention. Mother rats vary in the degree to which they care for (lick, groom and nurse) the pups in their nest. When researchers placed pups from a »low-care« mom's litter into a »high-care« mom's nest, they observed that these pups were less fearful and became »more caring« than other offspring of »low care« females. Simply said, more care in one generation yielded more care in the next generation.

The McGill researchers go hurtling down a slippery slope in search of molecules (they show that mRNA levels for certain hormones and binding activity of a hormone receptor vary among pups with »low-care« and »high-care« moms). They argue that since twin studies »suggest genetic inheritance« plays a role in personality, it would make sense to look for such genes in rats. Having established some correlations between rat behavior and the expression of a few genes in their brains, our

researchers then conclude that their finding has implications for humans: »In humans, social, cultural, emotional and economic contexts influence the quality of the relationship between parent and child and can show continuity across generations. Our findings in rats may thus be relevant in understanding the importance of early intervention programs in humans«. The circle is closed. The bow to socially useful science has been made.

The article contains some anthropocentric slips in its tight scientific prose that raise warning flags for an anthropologist. For example, »Individual differences in personality traits appear to be transmitted from parents to offspring. A critical question, however, concerns the mode of inheritance«. Actually, the first critical question is the definition of an »individual« in the world of laboratory rats and the second question what could be meant by a rat's »personality«? »Personality« refers to »persons«. Persons, from *persona* in Roman law, are moral figures. There are no such beings in the world of rats. Our researchers would do well to a more precise vocabulary.

There is a double take-home message:

(1) humanity's self-image has had a rough millennium (consequently bio-scientists should learn to be attentive to their anthropomorphisms);
(2) whatever your species, love and care for your offspring (support Head Start).

Opening the door for an understanding of a »mechanism of a non-genomic mode of inheritance«, might well show that genes have a range of variability in their expression depending on the environment. The same genes express themselves differently in different settings. Genes, one should say, are part of a more complex picture that must include the genome although that step is hardly the end of the story, only the end of a beginning.

Although one must acknowledge that for reasons that are almost entirely unexplored, industrial societies have provided the resources necessary for some to conduct a leisured, if not leisurely, exploration of things. Given this space, and for as long as it lasts, we should be hard at work thinking, writing, and inquiring. It follows that a central question before us is: what form should this writing, thinking, and inquiring take? And what norms should govern it? And to what telos does it strive?

It is easy to agree with one of Habermas' conclusions:

»The new technologies make a public discourse on the right understanding of cultural forms of life in general an urgent matter. And philosophers no longer have any good reasons for leaving a dispute to biologists and engineers intoxicated by science fiction«. (Habermas 2003: 15)

I agree. I would add, however, that anthropologists no longer have any good reason to leave such matters to sober philosophers devoted to an ascetic ideal of an undamaged life without risks, as the universal norm of our species morality. Let us

return instead to the actual world of the contemporary with its messy ethical problems, its diverse forms of knowledge, its pedagogical and political challenges. Along with Michel Foucault, let me advocate a »patient labor giving form to our impatience for freedom«. Such work may prove irritating and insufficient for some but for others it is the path to a *Lebensführung* worthy of the contemporary, that is to say one attentive to emergent *logoi* claiming to tell us who we really are, ones that need to be taken into account, appropriately, as one dimension, but only one dimension, of the risky practice of assembling a different figure of anthropos.

Anthropological inquiry is based first and foremost by listening, observing, hearing, seeing, querying, sensing, reflecting, pondering, wondering, and writing, at various times during, before and after performing these others actions. Its goal is identifying, understanding, and formulating something actual neither by directly identifying with it nor by making it exotic. Rather it seeks to articulate a mode of adjacency. Such work may be lonely – after all, who else wants to be untimely and adjacent – but it can never be done alone. Inquiry proceeds tentatively, using concepts as tools, testing them, and re-fashioning them, in an appropriate manner. How to determine what is an »appropriate manner« is one of the central interpretive or diagnostics tasks challenging researchers and thinkers. It is often the case that historical work on the concepts one deploys is helpful as these concepts themselves were forged to do certain work in different contexts, or better in different assemblages and apparatuses, whose singularity must be identified both in the past and in the present. Then we will be clearer about what we expect of an appropriate concept. One thing is certain; it will not be a general theory of appropriateness.

Thus, we are at the end of the beginning once again; and with Max Weber we must say: »The only question that remains is the sense in which science (Wissenschaft) gives ›no‹ answer, and whether or not science (Wissenschaft) might yet be of some use to the one who puts the question correctly«.

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